

U.S. Application Ser. No. 10/522,215  
Amendment and Response

Docket No. 65321(54558)

### **AMENDMENTS TO THE CLAIMS**

Please amend claims 28, 30, 44, 48 and 50 and please add claims 60 and 61.

The following listing of the claims will replace all prior versions, and listings, of claims in the application.

1. - 27. (Canceled)

28. (Currently Amended) A method for treating a solid or hematological cancer or haematological malignancy comprising a membrane receptor androgen receptor (MAR), the method comprising administering to a patient in need thereof a composition comprising: (a) one or more androgen steroids excluding cyostaticum, wherein the androgen steroid is covalently attached to a mammalian protein excluding an antibody; and (b) a cytoskeleton-acting drug, wherein the cancer comprises membrane androgen receptor-bearing cells.

29. (Previously Presented) The method of claim 28, wherein the solid cancer is one of prostate adenocarcinoma (hormone sensitive or resistant) and metastases thereof, breast cancer and metastases thereof, pheochromocytomas and metastases thereof, bone tumor and metastases thereof and brain tumor (neuroblastomas).

30. (Currently Amended) The method of claim 28, wherein the haematological cancer is one of malignancies are acute and or chronic myeloid leukemia, acute and or chronic lymphoid leukaemia leukemia and a lymphomas (B and or T).

31. (Previously Presented) The method of claim 28, wherein the androgen steroid is an androgen.

32. (Previously Presented) The method of claim 28, wherein the androgen is testosterone.

33. (Previously Presented) The method of claim 28, wherein the mammalian protein is a recombinant or isolated natural serum albumin.

34. (Previously Presented) The method of claim 28, wherein the composition is detectably-labeled.

35. (Previously Presented) The method of claim 32, wherein the testosterone is covalently attached to the mammalian protein through a carboxy-methyl ether linker.

36. (Previously Presented) The method of claim 35, wherein the linker is covalently attached to the testosterone at the 3' position of the steroidal ring.

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37. (Previously Presented) The method of claim 28, wherein the cytoskeleton-acting drug is Taxol or Taxotere.

38. (Withdrawn) The method of claim 28, the composition further comprises an antiandrogen.

39. (Withdrawn) The method of claim 38, wherein the antiandrogen is present in about a 10-fold molar excess relative to the molar amount of the one more steroids.

40. (Withdrawn) The method of claim 28, wherein the administration of the composition is parenteral, percutaneous or intravenous.

41. (Previously Presented) The method of claim 28, wherein the composition is administered at least once daily.

42. (Withdrawn) The method of claim 28, wherein the method further comprises the step of administering an antiandrogen to the patient.

43. (Previously Presented) The method of claim 28, wherein the method further comprises the step of decreasing solid cancer mass in the patient.

44. (Currently Amended) A method for treating prostate cancer comprising administering to a patient in need thereof a composition comprising Testosterone-3-(O-carboxymethyl)oxime-human serum albumin and Taxol or Taxotere.

45. (Previously Presented) The method of claim 44, wherein the composition further comprises an antiandrogen.

46. (Previously Presented) The method of claim 44, wherein the method further comprises the step of administering an antiandrogen to the patient.

47. (Previously Presented) The method of claim 44, wherein the method further comprises the step of decreasing prostate cancer mass in the patient.

48. (Currently Amended) A method for treating a solid or hematological cancer or ~~haematological-malignancy comprising a membrane androgen receptor (mAR)~~, the method comprising administering to a patient in need thereof a composition comprising: (a) one or more androgen steroids excluding cyostaticum, wherein the androgen steroid is covalently attached to a mammalian protein excluding an antibody selected from the group consisting of a globular protein, a plasma protein, and albumin; and (b) a cytoskeleton-acting drug, wherein the cancer comprises membrane androgen receptor-bearing cells.

49. (Previously Presented) The method of claim 48, wherein the solid cancer is one of prostate adenocarcinoma (hormone sensitive or resistant) and metastases thereof,

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breast cancer and metastases thereof, pheochromocytomas and metastases thereof, bone tumor and metastases thereof and brain tumor (neuroblastomas).

50. (Currently Amended) The method of claim 48, wherein the haematological cancer is one of malignancies are acute and or chronic myeloid leukemia, acute and or chronic lymphoid leukaemia leukemia and a lymphomas (B and or T).

51. (Previously Presented) The method of claim 48, wherein the steroid is an androgen.

52. (Previously Presented) The method of claim 48, wherein the androgen steroid is testosterone.

53. (Previously Presented) The method of claim 48, wherein the mammalian protein is a recombinant or isolated natural serum albumin.

54. (Previously Presented) The method of claim 48, wherein the composition is detectably-labeled.

55. (Previously Presented) The method of claim 52, wherein the testosterone is covalently attached to the mammalian protein through a carboxy-methyl ether linker.

56. (Previously Presented) The method of claim 55, wherein the linker is covalently attached to the testosterone at the 3' position of the steroidal ring.

57. (Previously Presented) The method of claim 48, wherein the cytoskeleton-acting drug is Taxol or Taxotere.

58. (Previously Presented) The method of claim 48, wherein the composition is administered at least once daily.

59. (Previously Presented) The method of claim 48, wherein the method further comprises the step of decreasing solid cancer mass in the patient.

60. (New) A method for treating a solid cancer, the method comprising administering to a patient in need thereof a composition comprising: (a) one or more androgen steroids excluding cytostaticum, wherein the androgen steroid is covalently attached to a mammalian protein excluding an antibody; and (b) a cytoskeleton-acting drug, wherein the solid cancer is prostate adenocarcinoma (hormone sensitive or resistant) and metastases thereof, breast cancer and metastases thereof, pheochromocytomas and metastases thereof, bone tumor and metastases thereof or brain tumor (neuroblastomas) and wherein the cancer comprises membrane androgen receptor-bearing cells.

61. (New) A method for treating a solid cancer, the method comprising administering to a patient in need thereof a composition comprising: (a) one or more androgen steroids

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excluding cylostaticum, wherein the androgen steroid is covalently attached to a mammalian protein excluding an antibody selected from the group consisting of a globular protein, a plasma protein, and albumin; and (b) a cytoskeleton-acting drug, wherein the solid cancer is prostate adenocarcinoma (hormone sensitive or resistant) and metastases thereof, breast cancer and metastases thereof, pheochromocytomas and metastases thereof, bone tumor and metastases thereof and brain tumor (neuroblastomas) and wherein the cancer comprises membrane androgen receptor-bearing cells.